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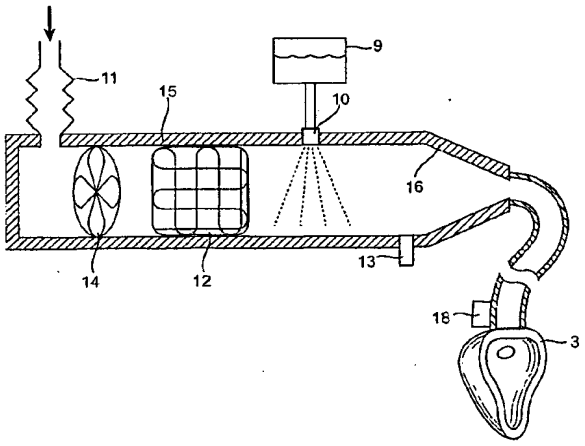
(54) Title: RESPIRATORY SYSTEM FOR INDUCING THERAPEUTIC HYPOTHERMIA



(57) Abstract: The present invention provides a method and apparatus for controlling a patient's body temperature and in particular for inducing therapeutic hypothermia. Various embodiments of the system are described. The system includes: a source of breathing gas (1), which may be in the form of a compressed breathing gas mixture; a heat exchanger (2) or other heating and/or cooling device; and a breathing interface, such as a breathing mask (3) or tracheal tube. Optionally, the system may include additional features, such as a mechanical respirator (11), a nebulizer (18) for introducing medication into the breathing gas, a body temperature probe (7) and a feedback controller (6). The system can use air or a specialized breathing gas mixture, such as He/O_2 or SF_6/O_2 to increase the heat transfer rate. In addition, the system may include an ice particle generator (10) for introducing fine particles into the flow of breathing gas to further increase the heat transfer rate.

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